

ABSTRACT

A traveling yarn tension compensating system having a pair of vertically disposed, horizontally spaced ball-type yarn tensioning units and a yarn tension compensating device disposed therebetween. The device has a yarn engaging element with a yarn engaging surface that is downwardly convex for engaging a yarn thereunder. The surface is fixed so as not to rotate or otherwise move in the direction of travel of the yarn and is made of a material that imposes a tension increasing frictional drag on the traveling yarn. The surface engaging element is mounted to be freely movable vertically in response to tension in the traveling yarn. The convex shape of the yarn engaging surface results in a greater extent of surface engagement of the yarn when the surface engaging element is in a lower position resulting from lesser tension in the yarn and at which position it deflects the yarn downwardly over the yarn guides. When there is greater tension in the traveling yarn, the yarn raises the surface engaging element to upper positions at which the extent of surface contact by the surface and the yarn guides is less.